

A Scalable MOS Field Effect Transistor

ABSTRACT OF THE INVENTION

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E! ~~A field effect transistor and method for making is described~~
incorporating self aligned source and drain contacts with Schottky
metal-to-semiconductor junction and a T-shaped gate or
10 incorporating highly doped semiconductor material for the source
and drain contacts different from the channel material to provide
etch selectivity and a T-shaped gate or incorporating a metal for
the source and drain contacts and the oxide of the metal for the
gate dielectric which is self aligned. The invention overcomes the
problem of self-aligned high resistance source/drain contacts and
a high resistance gate electrode for submicron FET devices which
increase as devices are scaled to smaller dimensions.